AMENDED CLAIMS

1. An apparatus for the continuous melting and refining of anorganic compounds, especially glasses or glass ceramics;

1.1 with a melting vessel (1);

1.2 with a refining vessel (3) which is configured according to the skull principle;

1.3 with an induction coil (5) being associated with the refining vessel (3), which coil is used for coupling in a high-frequency energy into the vessel content and encloses the walls of the refining vessel (3);

1.4 with a connecting line (2) which is used for transferring the melt from the melting vessel (1) to the refining vessel;

1.5 with the connecting line (2) emerging from the floor zone of the melting vessel (1) and into the refining vessel in the floor zone of the same.

2. An apparatus as claimed in claim 1, characterized in that the connecting line (2) emerges laterally from the floor zone 1.1 of the melting vessel (1) and enters the refining vessel (3) through the floor 3.1 of the same.

3. An apparatus as claimed in claim 1 or 2, characterized in that a cooling groove (4) is provided downstream of the refining vessel (3).

4. An apparatus as claimed in claim 3, characterized in that the cooling groove (4) is provided downstream with a stirring crucible (6).

5. An apparatus as claimed in one of the claims 1 to 4, characterized in that the melting vessel (1) and/or the refining vessel (3) are disposed within a conductive screening cage.

6. A method for operation in an apparatus as claimed in one of the claims 1 to 5, characterized in that the melt is supplied continuously from the melting vessel (1) from below to the refining vessel (3) and flows in the upper zone via a cooling groove (4) to a stirring crucible (6).

7. A method as claimed in claim 6, characterized in that the melt level in the melting vessel (1), in the refining vessel (3), in the cooling groove (4) and in the stirring crucible (6) are at one and the same level in the manner of interconnected pipes.

8. A method as claimed in one of the claims 6 or 7, characterized in that the melting vessel (1) is made from ceramic stone material, of platinum or of a platinum alloy.

9. A method as claimed in one of the claims 6 to 8, characterized in that the melting vessel (1) consists of a so-called skull crucible and that the glass melt is heated in the melting vessel (1) by means of high frequency.

10. A method as claimed in one of the claims 6 to 9, characterized in that the connecting line (2) between the melting vessel (1) and the refining vessel (3) is made of a heatable platinum pipe or of a heatable stone groove.

11. A method as claimed in one of the claims 6 to 10, characterized in that the refining vessel (3) consists of a ceramic crucible and that the melt is heated in the refining vessel (3) by means of high frequency.

12. A method as claimed in one of the claims 5 to 11, characterized in that the refining vessel (3) consists of a skull crucible and that the melt is heated in the refining vessel (3) by means of high frequency.

13. A method as claimed in one of the claims 5 to 12, characterized in that the skull crucible is electrically short-circuited in the floor zone.

14. A method as claimed in one of the claims 5 to 13, characterized in that the melt is cooled in the cooling groove (4) from the refining temperature in the refining vessel (3) to 1500°C to 1550°C in the case of a platinum conditioning part (6) or to 1500°C to 1650°C in the case of a conditioning part (6) which is made of ceramic material.

15. A method as claimed in one of the claims 5 to 14, characterized in that the glasses to be refined are free of toxic refining agents such as $As_2O_3$ or $Sb_2O_3$.